

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A wireless receiver having a low-power listen mode, comprising:

a first receiver path having a low resolution analog-to-digital converter for decoding a preamble to a wireless data packet and a second receiver path having a high resolution analog-to-digital converter for decoding a data packet payload, a packet detection logic to identify data packets directed to the wireless receiver; and

a switching logic coupled to the packet detection logic to select the first receiver path or the second receiver path depending on whether the packet detection logic has identified a data packet directed to the wireless receiver, wherein the first receiver path has a lower decoding resolution than the second receiver path.
2. (Currently Amended) The wireless receiver of claim 1 wherein the second receiver path is ~~separate~~separated from the first receiver path.
3. (Previously presented) The wireless receiver of claim 1 wherein the first receiver path requires less power to operate than the second receiver path.
4. (Canceled)
5. (Previously presented) The wireless receiver of claim 1 wherein the first receiver path comprises a 2-bit analog-to-digital converter.
6. (Previously presented) The wireless receiver of claim 1 wherein the second receiver path comprises an 8-bit analog-to-digital converter.

7. (Previously presented) The wireless receiver of claim 1 wherein the first receiver path uses barker-code detection to decode the preamble.

8. (Canceled)

9. (Previously presented) The wireless receiver of claim 7 wherein the switching logic selects the first receiver path until the data packet is identified and then selects the second receiver path to decode the data packet payload.

10. (Currently Amended) A wireless receiver having a low-power listen mode, comprising:

a first analog front end comprising a low resolution analog-to-digital converter for receiving and decoding a preamble to a wireless data packet and a second analog front end comprising a high resolution analog-to-digital converter for receiving and decoding a data packet payload;

a packet detection logic to identify whether the wireless data packet is directed to the wireless receiver; and

a switching logic coupled to the packet detection logic to select the first analog front end or the second analog front end depending on whether the packet detection logic has identified the data ~~packet~~packets as being directed to the wireless receiver, wherein the first analog front end receives and decodes the preamble and the second analog front end receives and decodes the data packet payload, wherein the first analog front end has a lower resolution than the second analog front end.

11. (Previously presented) The wireless receiver of claim 10 wherein the first analog front end requires less power to operate than the second analog front end.

12. (Canceled)

13. (Previously presented) The wireless receiver of claim 10 wherein the first analog front end comprises a 2-bit analog-to-digital converter.

14. (Previously presented) The wireless receiver of claim 10 wherein the second analog front end comprises an 8-bit analog-to-digital converter.

15. (Previously presented) The wireless receiver of claim 10 wherein a first receiver path, coupled to the first analog front end, uses barker-code detection to decode the preamble.

16. (Canceled)

17. (Previously presented) The wireless receiver of claim 10 wherein the switching logic selects the first analog front end until the data packet is identified as being directed to the wireless receiver and then selects the second analog front end to receive the data packet payload.

18. (Currently Amended) A method for receiving data packets in a wireless receiver, comprising:

receiving radio frequency signals with a first receiver path comprising a low resolution analog-to-digital converter;

decoding signals received through the first receiver path to detect a code in a preamble of a received data packet;

upon detection of the code, switching to a second receiver path;

receiving a payload of the received data packet with the second receiver path comprising a high resolution analog-to-digital converter, wherein the first receiver path has a lower decoding resolution than the second receiver path; and

decoding the payload received through the second receiver path using the decoding resolution of the second receiver path.

19. (Original) The method of claim 18 further comprising switching back to the first receiver path when receiving of the payload is completed.

20. (Previously presented) The method of claim 18 wherein the first receiver path requires less power than the second receiver path.

21. (Currently amended) A wireless device that is adapted to receive data packets from another wireless device, comprising:

receiving means for receiving encoded information via a data packet, the
receiving means comprising

a first decoding means comprising a low resolution analog-to-digital converter for decoding ~~the~~ preamble of the data packet, the receiving means further comprising a second decoding means comprising a low resolution analog-to-digital converter for decoding ~~the~~ payload of the data packet, and switching means for switching between the first and second decoding means, wherein the first decoding means has a lower decoding resolution than the second decoding means.

22. (Canceled)